

## PATENT COOPERATION TREATY

PCT/JP2004/00007  
*17.11.11*

From the INTERNATIONAL BUREAU

To:

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Date of mailing (day/month/year)  
 03 November 2005 (03.11.2005)

Applicant's or agent's file reference  
 664167

## IMPORTANT NOTIFICATION

International application No.  
 PCT/JP2004/000074

International filing date (day/month/year)  
 08 January 2004 (08.01.2004)

Applicant  
 TANABE SEIYAKU CO., LTD. et al

1. **Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. **Transmittal of the copy of the translation to the designated or elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

EP, KR

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. **Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

**It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.**

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## PATENT COOPERATION TREATY



## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 664167	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/JP2004/000074	International filing date (day/month/year) 08 January 2004 (08.01.2004)	Priority date (day/month/year) 09 January 2003 (09.01.2003)	
International Patent Classification (IPC) or national classification and IPC C07D 491/048, 213/75, A61K 31/444, 31/4545, 31/4985, 31/5377, 31/4355, A61P 7/02, 9/00, 9/10, 43/00			
Applicant TANABE SEIYAKU CO., LTD.			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p> <input checked="" type="checkbox"/> Box No. I Basis of the report  <input type="checkbox"/> Box No. II Priority  <input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  <input type="checkbox"/> Box No. IV Lack of unity of invention  <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  <input checked="" type="checkbox"/> Box No. VI Certain documents cited  <input type="checkbox"/> Box No. VII Certain defects in the international application  <input type="checkbox"/> Box No. VIII Certain observations on the international application     </p>
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Date of submission of the demand 08 January 2004 (08.01.2004)	Date of completion of this report 06 December 2004 (06.12.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/JP2004/000074

## Box No. I Basis of the report

1. With regard to the language, this report is based on:

the international application in the language in which it was filed

the translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

international search (Rule 12.3(a) and 23.1(b))

publication of the international application (Rule 12.4(a))

international preliminary examination (Rule 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished

the description:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (*specify*): \_\_\_\_\_

any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (*specify*): \_\_\_\_\_

any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/000074

## Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

 the entire international application claims, Nos. 25-27

because:

 the said international application, or said claims Nos. \_\_\_\_\_

relate to the following subject matter which does not require an international preliminary examination (specify):

 the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_  
are so unclear that no meaningful opinion could be formed (specify): the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported  
by the description that no meaningful opinion could be formed (specify): no international search report has been established for said claims Nos. 25-27 a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit: furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it. furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it. pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13ter.1(a) or (b) and 13ter.2. a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-bis of the Administrative Instructions, and such tables were not available to the International Preliminary Examining Authority in a form and manner acceptable to it. the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions. See Supplemental Box for further details.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/JP2004/000074

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1 - 24	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1 - 24	NO
Industrial applicability (IA)	Claims	1 - 24	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

Document 1 (WO 95/33720 A1 (Green Cross Corp.), 14 December 1995) discloses a compound represented by general formula (I) (see original IPRP2 for formula), wherein

M is N,  
 L is O,  
 U is =N-,  
 R<sup>1</sup>, R<sup>2</sup> are hydrogen, amino groups or the like,  
 A is (1) (see original IPRP2 for formula) or (2) (see original IPRP2 for formula),  
 B is (3) (see original IPRP2 for formula) wherein W is =CH-, =N-, R<sup>3</sup>, R<sup>4</sup> are hydrogen or the like and  
 D is (i) (see original IPRP2 for formula) wherein Q is O, S, N; p, r are 0, 1; q is 0, 1, 2, 3 (wherein when p is 1, one of either q or r is not 0).

Claims 1-24

The inventions set forth in claims 1-24 do not involve an inventive step in the light of document 1 cited in the international search report.

When the activity of a certain compound in a certain field is known, it is common practice to keep the main skeleton of said compound as it is, to synthesise

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/JP2004/000074Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

compounds in which its substituent groups are changed and to investigate the activity of such compounds. Moreover, it is common practice to protect free amino groups with acyl groups. There would be no particular creative ability require in modifying the substituent groups of the ring in the compound disclosed in document 1, in protecting the amino groups binding to the ring with acyl groups, thereby producing a new compound. Therefore, the compounds set forth in the present application fall within the scope of such compounds set forth in document 1.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
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Box No. VI Certain documents cited			
1. Certain published documents (Rule 70.10)			
Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO 03/82847 A1  (Tanabe Seiyaku Co., Ltd.)	09.10.2003	27.03.2003	28.03.2002
2. Non-written disclosures (Rule 70.9)			
Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)	